Test Report
Stability of Mix

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	9
Date	24-Apr-2018

Sl. No.	Description	Unit	Test 1	Requirements as per MORT&H
1	Marshal Stability	KN	**9.85**	9 KN (min)
2	Marshal Flow	mm	**3.6**	2 – 4 mm
3	Percent of Air Voids in mix	%	**4.25**	3 – 6 %
4	Percent of Voids in Mineral Aggregates filled with Bitumen	%	**71.85**	65 – 75 %
5	Density	g/cc	**2.21**	2.22 g/cc

Note:

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ii. The results relate only to the items tested.
iii. This test report should not be reproduced except in full, without written approval of this laboratory.
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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Stability of Mix

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	10
Date	25-Apr-2018

Sl. No.	Description	Unit	Test 1	Requirements as per MORT&H
1	Marshal Stability	KN	**9.6**	9 KN (min)
2	Marshal Flow	mm	**3.53**	2 – 4 mm
3	Percent of Air Voids in mix	%	**4.36**	3 – 6 %
4	Percent of Voids in Mineral Aggregates filled with Bitumen	%	**71**	65 – 75 %
5	Density	g/cc	**2.22**	2.22 g/cc

Note:

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Stability of Mix

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	11
Date	25-Apr-2018

Sl. No.	Description	Unit	Test 1	Requirements as per MORT&H
1	Marshal Stability	KN	**9.61**	9 KN (min)
2	Marshal Flow	mm	**3.51**	2 – 4 mm
3	Percent of Air Voids in mix	%	**4.53**	3 – 6 %
4	Percent of Voids in Mineral Aggregates filled with Bitumen	%	**71.7**	65 – 75 %
5	Density	g/cc	**2.21**	2.22 g/cc

Note:

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Project Division
Yelahanka Zone
Bangalore

Test Report
Stability of Mix

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in ward no 05 byatarayanapura sub division
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	12
Date	25-Apr-2018

Sl. No.	Description	Unit	Test 1	Requirements as per MORT&H
1	Marshal Stability	KN	**9.74**	9 KN (min)
2	Marshal Flow	mm	**3.43**	2 – 4 mm
3	Percent of Air Voids in mix	%	**4.63**	3 – 6 %
4	Percent of Voids in Mineral Aggregates filled with Bitumen	%	**72.8**	65 – 75 %
5	Density	g/cc	**2.22**	2.22 g/cc

Note:

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Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout haribara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/1
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	1
Date	22-Apr-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_{sb})	gm	w_{sb}	1752
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	672
4	Weight of bowl + Sample after extraction (w_{sa})	gm	w_{sa}	1714
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	634
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	38
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	36
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_b$)	(%)	$W_a / SbX100$	5.36

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	675.00	16.88	16.88	83.13	72-100	
3	9.50	432.00	10.80	27.68	72.33	70-88	
4	4.75	231.00	5.78	33.45	66.55	53-71	
5	2.36	481.00	12.03	45.48	54.53	42-58	
6	1.18	343.00	8.58	54.05	45.95	34-48	
7	0.60	436.00	10.90	64.95	35.05	26-38	
8	0.30	430.00	10.75	75.70	24.30	18-28	
9	0.15	381.00	9.53	85.23	14.78	12-20)	
10	0.08	360.00	9.00	94.23	5.77	(4-10)	

For Mecadez Core Technologies Private Limited

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout haribara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/1
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	2
Date	22-Apr-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_{sb})	gm	w_{sb}	1753
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	673
4	Weight of bowl + Sample after extraction (w_{sa})	gm	w_{sa}	1715
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	635
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	38
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	36
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_b$)	(%)	$W_a / SbX100$	5.35

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	675.00	16.88	16.88	83.13	72-100	
3	9.50	432.00	10.80	27.68	72.33	70-88	
4	4.75	231.00	5.78	33.45	66.55	53-71	
5	2.36	481.00	12.03	45.48	54.53	42-58	
6	1.18	343.00	8.58	54.05	45.95	34-48	
7	0.60	436.00	10.90	64.95	35.05	26-38	
8	0.30	430.00	10.75	75.70	24.30	18-28	
9	0.15	381.00	9.53	85.23	14.78	12-20)	
10	0.08	360.00	9.00	94.23	5.77	(4-10)	

For Mecadez Core Technologies Private Limited

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/1
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	3
Date	23-Apr-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_{sb})	gm	w_{sb}	1780
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	700
4	Weight of bowl + Sample after extraction (w_{sa})	gm	w_{sa}	1737
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	657
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	43
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	41
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_b$)	(%)	$W_a / SbX100$	5.86

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	662.00	16.55	16.55	83.45	72-100	
3	9.50	412.00	10.30	26.85	73.15	70-88	
4	4.75	231.00	5.78	32.63	67.38	53-71	
5	2.36	481.00	12.03	44.65	55.35	42-58	
6	1.18	311.00	7.78	52.43	47.58	34-48	
7	0.60	416.00	10.40	62.83	37.18	26-38	
8	0.30	378.00	9.45	72.28	27.73	18-28	
9	0.15	368.00	9.20	81.48	18.53	12-20)	
10	0.08	360.00	9.00	90.48	9.53	(4-10)	

For Mecadez Core Technologies Private Limited

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/1
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V
Location	Bay
Material	Bituminous Concrete mix
Sample No	4
Date	23-Apr-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1790
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	710
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1749
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	669
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	41
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	39
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_b$)	(%)	$W_a / SbX100$	5.49

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	665.00	16.63	16.63	83.38	72-100	
3	9.50	417.00	10.43	27.05	72.95	70-88	
4	4.75	232.00	5.80	32.85	67.15	53-71	
5	2.36	490.00	12.25	45.10	54.90	42-58	
6	1.18	314.00	7.85	52.95	47.05	34-48	
7	0.60	419.00	10.48	63.43	36.58	26-38	
8	0.30	382.00	9.55	72.98	27.03	18-28	
9	0.15	380.00	9.50	82.48	17.53	12-20)	
10	0.08	370.00	9.25	91.73	8.28	(4-10)	

For Mecadez Core Technologies Private Limited

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/1
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V
Location	Bay
Material	Bituminous Concrete mix
Sample No	5
Date	24-Apr-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_s)	gm	w_{sb}	1800
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	720
4	Weight of bowl + Sample after extraction (w_s)	gm	w_{sa}	1765
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	685
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	35
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	33
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_b$)	(%)	$W_a / SbX100$	4.58

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	671.00	16.78	16.78	83.23	72-100	
3	9.50	419.00	10.48	27.25	72.75	70-88	
4	4.75	235.00	5.88	33.13	66.88	53-71	
5	2.36	487.00	12.18	45.30	54.70	42-58	
6	1.18	322.00	8.05	53.35	46.65	34-48	
7	0.60	425.00	10.63	63.98	36.03	26-38	
8	0.30	379.00	9.48	73.45	26.55	18-28	
9	0.15	382.00	9.55	83.00	17.00	12-20)	
10	0.08	373.00	9.33	92.33	7.68	(4-10)	

For Mecadez Core Technologies Private Limited

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Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/1
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V.
Location	Bay
Material	Bituminous Concrete mix
Sample No	6
Date	24-Apr-2018

Sl. No.	Description	Unit	Computation	Test Result
1	Weight of Empty bowl before Extraction (E)	gm	Eb	1080
2	Weight of bowl + Sample before extraction (w_{sb})	gm	w_{sb}	1785
3	Weight of Sample taken for the test (S_b)	gm	$S_b = w_{sb} - Eb$	705
4	Weight of bowl + Sample after extraction (w_{sa})	gm	w_{sa}	1751
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	$S_a = w_{sa} - Eb$	671
6	Weight of Filter paper before extraction (F_b)	gm	F_b	2
7	Weight of Filter paper after extraction (F_a)	gm	F_a	4
8	Weight of filler on filter paper (F_d)	gm	$F_d = F_b - F_a$	2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_b	34
10	Weight of the Bitumen with considering Filter paper (W_a)	gm	$W_a = w_b - F_d$	32
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_b$)	(%)	$W_a / SbX100$	4.54

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		
					Test Result	Gradation Limits as per MORT&H	Remarks
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation satisfies the MORT&H Grade II Specification for Bituminous Concrete
2	13.20	665.00	16.63	16.63	83.38	72-100	
3	9.50	419.00	10.48	27.10	72.90	70-88	
4	4.75	235.00	5.88	32.98	67.03	53-71	
5	2.36	492.00	12.30	45.28	54.73	42-58	
6	1.18	318.00	7.95	53.23	46.78	34-48	
7	0.60	426.00	10.65	63.88	36.13	26-38	
8	0.30	385.00	9.63	73.50	26.50	18-28	
9	0.15	382.00	9.55	83.05	16.95	12-20)	
10	0.08	370.00	9.25	92.30	7.70	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Engineer
Project Division
Yelahanka Zone
Bangalore

Test Report
Binder Content and Mix Gradation

Project Name	1. Improvement of roads and drain at kogilu layout main road and cross road in ward no 05 byatarayanapura sub division 2. Improvement of roads and drain at kattigenahalli kuvempunagara cross road in ward no 05 byatarayanapura sub division 3. Improvement of drain at dwarakanagara srirama temple road in ward no 05 byatarayanapura sub division 4. Improvement of roads and drain at kattigenahalli surrounding area in ward no 05 byatarayanapura sub division 5. Improvement of roads and drain at nirantara layout in ward no 05 byatarayanapura sub division 6. Improvement of drain and asphalting to road at agrahara layout harihara temple surrounding area in
Client	Executive Engineer Project Division Yelahanka Zone
Job No	MCTPL/BBMP/Project Division Yelahanka Zone /PMC/2017-2018/QR/P-8/1
Mix Type	Bituminous Concrete (BC)
Contractor	Sri A Chennareddy
Test Method	Specification for Road & Bridge Works, MORT&H, Revision V
Location	Bay
Material	Bituminous Concrete mix
Sample No	7
Date	25-Apr-2018

Sl. No.	Description	Unit		Computation	Test Result
1	Weight of Empty bowl before Extraction (Eb)	gm	W_{eb}	Eb	1080
2	Weight of bowl + Sample before extraction (W_{sb})	gm	S_b	W_{sb} - Eb	1800
3	Weight of Sample taken for the test (S_b)	gm	W_{sa}		720
4	Weight of bowl + Sample after extraction (W_{sa})	gm	S_a	W_{sa} - Eb	1767
5	Weight of Sample after extraction (i.e. washed aggregates) (S_a)	gm	F_b		687
6	Weight of Filter paper before extraction (F_b)	gm	F_a		2
7	Weight of Filter paper after extraction (F_a)	gm	F_d	$F_b - F_a$	4
8	Weight of filler on filter paper (F_d)	gm	W_b		2
9	Weight of Bitumen without considering Filter paper (W_b)	gm	W_a	$W_b - F_d$	42
10	Weight of the Bitumen with considering Filter paper (W_a)	(%)	W_a/ SbX100		40
11	Percentage of the Bitumen (i.e. Binder Content) ($\%_{bc}$)				5.56

Sl. No.	I.S. Sieve size (mm)	Weight Retained (gm)	Percentage of weight Retained (%)	Cumulative Percentage of weight retained (%)	Cumulative % of Passing		Remarks
					Test Result	Gradation Limits as per MORT&H	
1	19.00	0.00	0.00	0.00	100.00	100.00	Gradation
2	13.20	675.00	16.88	16.88	83.13	72-100	satisfies the
3	9.50	432.00	10.80	27.68	72.33	70-88	MORT&H
4	4.75	231.00	5.78	33.45	66.55	53-71	Grade II
5	2.36	481.00	12.03	45.48	54.53	42-58	Specificati
6	1.18	343.00	8.58	54.05	45.95	34-48	on for
7	0.60	436.00	10.90	64.95	35.05	26-38	Bituminous
8	0.30	430.00	10.75	75.70	24.30	18-28	Concrete
9	0.15	381.00	9.53	85.23	14.78	12-20)	
10	0.08	360.00	9.00	94.23	5.77	(4-10)	

For Mecadez Core Technologies Private Limited

Authorised Signature

Asst. Executive Enginee
Project Divisio
Yelahanka Zon
Bangalo